

1 **WHAT IS CLAIMED IS:**

2 1. A horizontal band saw comprising:

3 a base assembly comprising

4 a frame having a front, a rear and a transverse passage formed
5 between the front and the rear;

6 an elevating device mounted in the frame; and

7 a conveyer mounted in the transverse passage of the frame and
8 supported by the elevating device;

9 a sawing mechanism pivotally mounted on the frame and comprising

10 a housing pivotally mounted on the frame and having a bottom
11 and a cutting window above the conveyer; and

12 a bandsaw blade mounted in the housing and having a segment
13 traversing the cutting window; and

14 a bevel cutting adjustment device connecting the frame to the housing
15 and the bevel cutting adjustment device comprising

16 a rear pivot assembly mounted on the rear of the frame and
17 pivotally connected to the bottom of the housing; and

18 a front adjustment assembly mounted on the front of the frame
19 and connected to the bottom of the housing, and the front adjustment assembly
20 comprising

21 an inclination adjusting assembly connecting the front
22 of the frame to the bottom of the housing and the inclination adjusting assembly
23 comprising

24 a top stationary bracket mounted on the bottom

1 of the housing and having a pivot pin;
2 a bottom stationary bracket mounted on the
3 front of the frame and aligned with the top stationary bracket;
4 a pivot seat pivotally mounted on the bottom
5 stationary bracket and having a top;
6 an adjusting gear rotatably mounted in the top
7 of the pivot seat and having an axial threaded hole;
8 a driving assembly mounted on the pivot seat to
9 turn the adjusting gear; and
10 a leader threaded rod screwed into the axial
11 threaded hole of the adjusting gear and having a top end pivotally connected to
12 the pivot pin of the top stationary bracket and a bottom end extending out of the
13 pivot seat;
14 wherein the leader threaded rod selectively extends out of and retracts
15 into the axial threaded hole of the adjusting gear to move the top stationary
16 bracket closer to or farther away from the conveyer as the adjusting gear is
17 turned.

18 2. The horizontal band saw as claimed in claim 1, wherein
19 the driving assembly of the inclination adjusting assembly comprises
20 a shaft sleeve fastened on the pivot seat;
21 a diving shaft rotatably mounted in the shaft sleeve and having
22 an inside end and an outside end that extend respectively out of the shaft sleeve;
23 a handwheel attached to the outside end of the driving shaft to
24 turn the driving shaft; and

1 a driving pinion attached to the inside end of the driving shaft
2 and rotated by the driving shaft; and

3 the adjusting gear further has a ring gear engaged by the driving pinion.

4 3. The horizontal band saw as claimed in claim 1, wherein

5 the bottom stationary bracket comprises a stationary block fastened on
6 the front of the frame and a detachable block detachably attached to the front of
7 the frame, and the stationary block and the detachable block respectively have an
8 aligned pin hole; and

9 the pivot seat is pivotally mounted between the stationary and the
10 detachable blocks and further has two pivot pins respectively held in the pin
11 holes of the stationary and the detachable blocks.

12 4. The horizontal band saw as claimed in claim 1, wherein the front
13 adjustment assembly further comprises a vertical supporting post mounted on
14 the frame at a position below the bottom of the housing, the vertical supporting
15 post comprises a stationary seat attached to the frame at the position and a
16 threaded shank retractably screws into the stationary seat and having an enlarged
17 top end to support the bottom of the housing.

18 5. The horizontal band saw as claimed in claim 1, wherein the frame
19 further comprises a base having has four corners, a vertical support with a top
20 end integrally formed at each of the corners of the base and a transverse beam
21 with a top mounted on the top ends of two of the vertical supports;

22 wherein the transverse beams are parallel to each other, and the
23 transverse passage is defined between the transverse beams.

24 6. The horizontal band saw as claimed in claim 2, wherein

1 the bottom stationary bracket comprises a stationary block fastened on
2 the front of the frame and a detachable block detachably attached to the front of
3 the frame, and the stationary block and the detachable block respectively have an
4 aligned pin hole; and

5 the pivot seat is pivotally mounted between the stationary and the
6 detachable blocks and further has two pivot pins respectively held in the pin
7 holes of the stationary and the detachable blocks.

8 7. The horizontal band saw as claimed in claim 6, wherein the front
9 adjustment assembly further comprises a vertical supporting post mounted on
10 the frame at a position below the bottom of the housing, the vertical supporting
11 post comprises a stationary seat fastened on the frame at the position and a
12 threaded shank retractably screws in the stationary seat and having an enlarged
13 top end to support the bottom of the housing.

14 8. The horizontal band saw as claimed in claim 7, wherein the frame
15 further comprises a base having has four corners, a vertical support with a top
16 end integrally formed at each of the corners of the base and a transverse beam
17 with a top mounted on the top ends of two of the vertical supports;

18 wherein the transverse beams are parallel to each other, and the
19 transverse passage is defined between the transverse beams.

20 9. The horizontal band saw as claimed in claim 8, wherein
21 the base assembly further comprises

22 an actuator mounted on the base of the frame; and

23 a control box mounted on the rear of the frame; and

24 the elevating device comprises

two mounting brackets respectively fastened on the vertical supports of the frame, and each of the mounting brackets having a top and a bottom;

a hydraulic motor mounted on the bottom of one of the mounting brackets, actuated by the actuator and having a shaft extended upward;

two rod drive wheels rotatably mounted on each of the mounting brackets and each of the rod drive wheels having an axial threaded hole;

a belt drive wheel mounted on the top of each of the mounting bracket between the rod drive wheels;

an endless lifting belt meshed with the rod drive wheels and the belt drive wheels; and

a threaded lifting rod rotatably mounted in a respective one of the axial threaded holes in the rod drive wheels and having a top end connected to the conveyer;

wherein the shaft of the hydraulic motor concentrically connects to a respective one of the belt drive wheels to rotate the connected belt drive wheel.

10. The horizontal band saw as claimed in claim 9, wherein the elevating device further comprises

a counting disk concentrically attached to a respective one of the belt drive wheels and having an outer edge and multiple counting recesses equidistantly defined at the outer edge of the counting disk; and

a sensor mounted on the top of one of the mounting brackets, electrically connected to the control box and selectively corresponding to the counting recesses of the counting disk.